AMENDMENTS TO THE CLAIMS

Please cancel Claim 6 and amend Claims 1 and 8-10 as follows.

LISTING OF CLAIMS

1. (currently amended) A freezing prevention system for a refrigeration device including a refrigerant compressor for compressing and discharging refrigerant and a refrigerant evaporator for evaporating the refrigerant after being cooled and decompressed, the freezing prevention system comprising:

a temperature detection unit disposed in the refrigerant evaporator, for detecting a refrigerant temperature in the refrigerant evaporator; and

a control unit for controlling operation of the refrigerant compressor based on the refrigerant temperature detected by the temperature detection unit, wherein:

the control unit includes a calculating means for calculating an integral value of the detected refrigerant temperature integrating with respect to a passed time after the detected refrigerant temperature becomes equal to or lower than a predetermined integrating start temperature; [[and]]

the control unit stops the operation of the refrigerant compressor when the integral value calculated by the calculating means becomes equal to or larger than a predetermined value;

the control unit further includes another calculating means for calculating another integral value of detected refrigerant temperature integrating with respect to a passed time after the detected refrigerant temperature becomes higher than the predetermined integrating start temperature; and

the control unit re-starts the operation of the refrigerant compressor when the another integral value calculated by the another calculating means becomes equal to or larger than a predetermined re-start value.

2. (original) The freezing prevention system according to claim 1, wherein the temperature detection unit is a temperature sensor disposed on the refrigerant evaporator to detect a surface temperature of the refrigerant evaporator.

3. (original) The freezing prevention system according to claim 1, wherein:

the refrigerant evaporator includes a plurality of tubes in which the refrigerant after being cooled and decompressed flows, and a plurality of fins each of which is disposed between the tubes; and

the temperature detection unit is a temperature sensor arranged on one tube among the tubes to detect a surface temperature of the one tube.

4. (original) The freezing prevention system according to claim 3, wherein:

the tubes are arranged to extend in a vertical direction of the refrigerant evaporator; and

the temperature sensor is arranged on the one tube at a position separated at least by a predetermined distance from a bottom end of the refrigerant evaporator in the vertical direction.

5. (original) The freezing prevention system according to claim 1, wherein the predetermined integrating start temperature is a temperature at which condensed water on the refrigerant evaporator starts freezing.

6. (cancelled)

7. (original) The freezing prevention system according to claim 2, wherein:

the refrigerant evaporator includes a plurality of tubes in which the refrigerant after being cooled and decompressed flows, and a plurality of fins each of which is disposed between the tubes; and

the temperature detection unit is a temperature sensor arranged on one fin among the fins to detect a surface temperature of the one fin.

8 (currently amended) ~~The freezing prevention system according to claim 1, wherein~~ A freezing prevention system for a refrigeration device including a refrigerant compressor for compressing and discharging refrigerant and a refrigerant evaporator for evaporating the refrigerant after being cooled and decompressed, the freezing prevention system comprising:

a temperature detection unit disposed in the refrigerant evaporator, for detecting a refrigerant temperature in the refrigerant evaporator; and

a control unit for controlling operation of the refrigerant compressor based on the refrigerant temperature detected by the temperature detection unit, wherein:

the control unit includes a calculating means for calculating an integral value of the detected refrigerant temperature integrating with respect to a passed time after the detected refrigerant temperature becomes equal to or lower than a predetermined integrating start temperature;

the control unit stops the operation of the refrigerant compressor when the integral value calculated by the calculating means becomes equal to or larger than a predetermined value; and

the predetermined value is calculated by a latent heat amount in a predetermined volume of the condensed water in the refrigerant evaporator.

9. (currently amended) The freezing prevention system according to claim [[1]] 8, wherein the control unit re-starts the operation of the refrigerant compressor when the detected refrigerant temperature is higher than a predetermined re-start value.

10. (currently amended) An air conditioner comprising

an air conditioning case for defining an air passage through which air flows into a compartment;

a refrigerant cycle including a compressor for compressing refrigerant, a condenser that cools refrigerant discharged from the compressor, a decompression unit for decompressing refrigerant from the condenser, and an evaporator disposed in the air conditioning case to cool air by evaporating refrigerant form the decompression unit;

a temperature detection unit for detecting a temperature of the evaporator, relating to a refrigerant temperature in the evaporator; and

a control unit for controlling operation of the refrigerant compressor based on the temperature detected by the temperature detection unit, wherein:

the control unit includes a calculating means for calculating an integral value of the detected refrigerant temperature integrating with respect to a passed time after the detected temperature becomes equal to or lower than a predetermined integrating temperature; [[and]]

the control unit stops the operation of the compressor when the integral value calculated by the calculating means becomes equal to or larger than a predetermined value; and

the predetermined value is calculated by a latent heat amount in a predetermined volume of the condensed water in the refrigerant evaporator.

11. (original) The air conditioner according to claim 10, wherein the temperature detection unit is a temperature sensor for detecting a surface temperature of the evaporator.

12. (original) The air conditioner according to claim 11, wherein:

the evaporator includes a plurality of tubes through which refrigerant flows, and a plurality of fins each of which is disposed between the tubes; and

the temperature sensor is disposed on one tube to detect a surface temperature of the one tube.

13. (original) The air conditioner according to claim 11, wherein:

the evaporator includes a plurality of tubes through which refrigerant flows, and a plurality of fins each of which is disposed between the tubes; and

the temperature sensor is disposed on one fine to detect a surface temperature of the one fin.